Qty	Item Description

Mos Alpha

Cios Alpha is a high-end X-ray C-arm system with a dynamic flat panel detector for fluoroscopy and single image mode.

The compact, mobile system was developed for use in, e.g. cardio/vascular surgery, gastroenterology, urology, emergency surgery, orthopedics, and general surgery.

1   **FD 30x30**

High-resolution, dynamic flat panel detector with indirect converter technology (amorphous silicon) having a size of 30 cm x 30 cm, with a matrix of 1536 x 1536 pixels.

1   **Comfort Plus**

Ergonomic multifunctional foot switch for radiation release, control of radiation functions, and storing.

Mobile workstation including monitor column with motorized height adjustment and 240°vertically rotatable monitors (-30°to +210°) for flexible positioning of the TFT displays with integrated cable routing and fold-up function for transport and park position.

EMotion integrated sound system with interface for operating external (MP3) audio equipment via Aux-In jack (Aux input) including amplifier with digital sound processor (DSP) and 2-way stereo loudspeaker system for high-fidelity sound.

1   **Single Tank w. 25kW**

High-voltage generator with 25 kW (IEC) and rotating anode, including integrated active refrigeration system

1   **Dose measuring chamber**

System-integrated dose measuring chamber for displaying the dose area product or air kerma value.

The cumulative dose area product is displayed for the current patient and saved under the patient data.
The cumulated dose is automatically transferred to a radiation summary report and can be retrieved at any time.
For each patient a cumulative value is saved in the patient database.

Alternatively: Display of air kerma values

Qty	Item Description
1	**Standard basic chassis** C-arm chassis
1	**2 x 19" b/w High bright TFT monitor** Two 19" TFT displays with high luminance for live and reference image display.
1	**DICOM Send/Storage Commitment (StC)** Digital, unidirectional image transfer of single images or complete folders to a network in DICOM format. Feedback from the image archive (Storage Commitment).
1	**DICOM Print** For sending and printing of images by means of a virtual fllmsheet to a DICOM laser camera or printer. Provision of DICOM Print service for connection to a laser camera or a network printer (postscript-capable).
1	**_DICOM3Norklist/MPPS** _____ Import of patient/examination data from an external RIS/H IS patient management system with DICOM MWL (Modality Worklist) as well as feedback on the examination status with DICOM MPPS (Modality Performed Procedure Step).
	Printer installation kit Installation kit for connecting Sony UP D 89x, UP 97x, and 99x printers
1	**Spacer** Single-tank spacer
	Addit Set Accompanying Documents
1	**Additional Set of operator manuals**
	C-Arm drape/peel-away (10) Sample case of c-arm drapes (quantity of 10) for the Siemens C-Arms product portfolio. The drape was designed by Siemens and has a pull-away section to accommodate the outer section of the C-arm to allow arm movement while maintaining a sterile environment. Drapes are individually packaged and sterile. Drape reorders will be sold in case of 20 and use Siemens part CF31772.
1	**Initial onsite trng 24 hrs** Up to (24) hours of on-site clinical education training, scheduled consecutively during standard business hours for a maximum of (4) imaging professionals. Training will cover agenda items on the ASRT approved checklist. Uptime Clinical Education phone support is provided during the warranty period for specified posted hours. This educational offering must be completed (12) months from Install end date. If training is not completed within the applicable time period. Siemens nblinatinn to *nrfluirin* **the.**

One complimentary biomedical tuition is included with the purchase of this system.

Offset Part 14404888 additional set of operator manuals

Offset Part 14404887 additional set of operator manuals

OPTIONS

Qty	Item Description

1 **Int. detector laser light localizer**

integrated laser aimer on the detector which transmits a crosshair-laser.

1 **Basic chassis motorization w. position m**

C-arm base unit with motorization of orbital and angular movement. The attached control module for motorized

movements includes position storage keys for storage of 2 orbital and angular positions with corresponding collimator values.

Position memory

Position memory for storing and retrieving the orbital/ and angular position easily.

2 x 19" color high bright TPT monitor

Two 19" color TFT displays with high luminance for live and reference image display.

1 **DVI video splitter 2x**

Connection for an external live monitor (monitor A) and an external reference monitor (monitor B) via DVI connection.

1 **Remote control unit including holder**

Touch-based remote control unit for operating the C-arm from within the sterile work area. Includes the holder to attach to the side of the OR table (RoW and USA),

1 **Vascular software**

Subtraction angiography with vascular display as a subtraction series or roadmap, including - Pixelshift - Remask - Landmark - Dual channel function - contrast medium: iodine or CO2

Vascular software premium

Subtraction angiography to display vessels as a subtraction series or roadmap, with extended function for postprocessing of images and scenes in Subtractlon/Roadmap mode, including pixel shift, remask, landmark, dual-channel fixation, live graphic overlay.

Contrast medium: iodine or CO2.

CD/ DVD recorder

Direct output of fluoroscopy and image series on DVD recorder in MPEG4 format.

DICOM Query/Retrieve

Retrieval of archived images (DICOM Query/Retrieve - Service as SW) from a digital archive or a workstation. The images must have a DICOM XRF (X-Ray Radiofluoroscopy)/XA (X-Ray Angiography), CR (Computed Radiography), or SC (Secondary Capture) format.

Qty	Part No.	Item Description

USA/Canada WLAN Client

WLAN Client module with Ethernet connection for wireless transmission of DICOM image data, e.g. to a PACS (Picture Archiving and Communication System).

1

Sony UP99IAD printer - film and paper

Black & White Hybrid Graphic Printer.

The UP-971AD is a black and white HYBRID graphic printer that supports both analog and digital applications. The UP-971AD has both an analog video input as well as a USB 2.0 high speed interface for digital printing. The UP-971AD offers a resolution of 325 dpi and print speed of about 8 seconds. * Dimensions: 12.4 x 52 x 12.0 inches. * Print Media: 210mm width roll. * Print Size: 10.5 x 7.87 inches (Digital/MAX). " Printing Method: Thermal Printing. * Resolution: 325 dpi.

Detailed Technical Specifications

ct	Description
	The mobile C-arm system with its compact design is equipped with a high-resolution digital 1.536k x 1.536k imaging system including a continuous digital imaging chain and a touch-based user interface. The FD-based system with 3 image input formats and the available high-voltage generator guarantees an optimum fluoroscopy result. In the case of pulsed fluoroscopy, an acquisition speed of up to 30 p/s can be achieved; in single image mode power levels of 12 kW to 25 kW are possible depending on the selected system configuration. EASY (Enhanced Acquisition System) automatically adjusts close, contrast, and brightness, to deliver brilliant images in every situation, regardless of the objects position within the beam projection. In addition, the ergonomic and functional design of_the_user_interface-and-software-supports an ⁻optimized workflow⁻iiithWOR. A hard disk with a storage capacity of up to 100,000 images, USB interfaces, and a DVD-R/CD-ROM read/write drive incl. DICOM 3.0 offline Media format enable flexible data management. Loading and display of images from the same or other modalities (CT, MR, XA, US). DICOM 3.0 services can be used via the integrated DICOM 3.0 interface. The mobile workstation can optionally be equipped with the Flex monitor column (with 210° vertically rotatable monitors) or the Flex Plus column (monitor column with motorized height adjustment, with 210° vertically rotatable monitors and TFT displays that fold in towards each other for easier maneuverability during transport and protection of the displays when they are not used). The monitor columns are provided with integrated cable touting for flexible positioning of the TFT displays. The uninterruptible power supply (UPS) provides maximum data security. Efficiency and flexibility are ensured by upgrade options which allow the system to meet long-term requirements.

	The digital flat panel detector enables distortion-free imaging with a high spatial resolution and excellent contrast.
	
	The dynamic flat panel detector with integrated removable grid is especially suitable for fulfilling the requirements of general and interventional applications.
	
	Semi-conductor material: Amorphous silicon (a-Si) with Cal-scintillator
	
	      Size 30 cm x 30 em
	
	      Pixel *size:* 194 pm
	
	      Matrix size: 1.536 x 1.536 pixels
	
	      Acquisition depth: 16 bits
	
	Usable input formats:
	
	Mag 0: 30 cm x 30 cm
	
	Mag 1: 20 cm x 20 cm
	
	Mag 2: 15 cm x 15 cm

	The following functions can be performed with the multifunctional foot switch: Pedal functions - Radiation release for fluoroscopy Radiation release for selected operating modes (single image and depending on the options SUB, ROAD)

Description

Switch functions

  Selection of operating mode (single image, fluoroscopy, and depending on the options SUB, ROAD)

  Selection of the Video source at reference monitor (e.g x-ray image or endoscopic Image, depending on the option SmartView — HD video manager)

- Store (LH, LSH)

The mobile workstation is equipped with a central locking brake and cable deflectors on all castors as well as an easy-to-clean, ergonomically designed touch-based control panel and optical mouse. Wilh a storage compartment for the mouse and a mouse pad surfaces which is suitable for both left- and right-handers, Flexible vertical positioning of the TFT displays irrespective of the trolley position through freely rotatable monitor column with integrated cable routing

- Motorized height adjustment for adaptation to the viewing angle depending on the examiner's height and position

- Reduction of ambient light interference through optimized viewing angle

  180 degree rotating monitor column combined with a cable-free mobile workstation allows for optimal patient-side positioning of the monitors.

- TFT displays fold in towards each other for easier maneuverability during transport and to protect the monitors when they are not in use

The sound system is a complete audio package consisting of:

  Aux input for connecting external audio equipment such as an MP3 player (not supplied).

- Integrated stereo preamplifier with level control (Audlotec Fischer, 4ch DSP amplifier).

Two oval 2-way coax loudspeakers (Audiotec Fischer).

Single-tank high-frequency generator

The microprocessor-controlled high-voltage generator operates at an inverter control frequency of 18 kHz - 50 kHz and automatic fine voltage compensation (100 V - 240 V ± 10%, 50160 Hz ± 1 Hz).
High resolution is achieved by a dual-focus rotating anode tube with focal spots of 0.3 and 0.5 mm. The integrated active refrigeration system, thermal monitoring, and automatic pulse frequency adaptation ensure long-term availability during extended fluor° times.

The following operating modes are supported:

- Single image: 40 kV to 125 kV (3 mA - 250 mA)
- Fluoroscopy: 40 kV to 125 kV (3 mA - 250 mA) with 0.5 - 30 F/s, min. pulse width 5 ms

Resolution of the dose area product and air kerma value display

- Display of the dose area product in 0.01 cGycm ^{2}
- Display of air kerma in 0.1 oGyern^2

  Display of the cumulated air kerma value in 0.1 mGy
  The cumulated air kerma value is identified by a preceding dot.

Depending on country-specific regulations, the display can be changed by SIEMENS Service from the dose area product to the air kerma value and the cumulated air kerma value.

Description

The compact counterbalanced design of the C-arm chassis means a high degree of convenience and user-friendliness. It features good mobility even in the smallest, busiest environments. Furthermore, all castors have cable deflectors. The C-arm design has been optimized for maximum projection angles, allowing optimum patient access and flexible use in the OR. (Immersion depth: 73 cm, free space between tube and FD 85 cm, focus-FD distance: 110 cm, orbital movement 148°(-51,5°; +96.5°), angulation ±225°, swivel range ±12°, horizontal movement 20 cm). It can easily be adjusted In its vertical position by means of motorized vertical travel (45 cm).

The color-coded electromagnetic brakes with control buttons on all control consoles and on the flat panel detector housing facilitate fast and safe C-arm positioning.

An easily accessible handle on the flat panel detector allows for effortless positioning from within the sterile area without restricting patient access.

The easy-to-clean touch-based control panel is attached to the C-arm by means of the horizontal carriage and has the same function as the control panel on the mobile workstation.

The following functions can also be controlled:

- Brakes for all directions of movement

- Vertical movement

- Emergency STOP

With anti-glare coating for displaying live and reference images.
- Screen size 19" (48 cm)
- Image display with 1280 x1024 pixels
  Large horizontal and vertical viewing angles of >=170°
- Typical/Maximum brightness <=1000 typ. cd/m^2

Note concerning DICOM interface(s)
The description in the "DICOM Conformance Statement" downloadable from the Internet is exclusively binding for the functionality of the DICOM interface(s).

Functionalities across system borders with/between partner systems require explicit validation, since the interpretation of the interface by the partnerltarget system is not part of the product's responsibility. Such validation can be done on a time and material basis.

A modification of the interface that might be required is not included in the offer; e.g. for the rare case, that available configurations are not sufficient.
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For increasing the minimum source-skin distance to 30 cm

For precise, radiation-free positioning with tube in undertable position.

The compact, counterbalanced design of the C-arm chassis provides a high degree of convenience and user-friendliness. It features good mobility even in the smallest, busiest environments. Furthermore, all castors have cable deflectors. The C-arm design has been optimized for maximum projection angles, allowing optimum patient access and flexible use in the OR. (Immersion depth: 73 cm, free space between tube and FD 85 cm, focus-FD distance: 110 cm, orbital movement 148°(-51.5°; +96.5°), angulation ± 225°, swivel range ± 12°, horizontal movement 20 cm). The C-arm is completely counterbalanced. It can easily be adjusted in its vertical position by means of a motorized vertical travel (45 cm).

The color-coded electromagnetic brakes with control buttons on all control consoles and on the flat panel detector housing facilitate fast and safe C-arm positioning.

An easily accessible handle on the flat panel detector allows for effortless positioning from within the sterile area without restricting patient access.

The easy-to-clean touch-based control panel is attached to the C-arm by means of the horizontal carriage and has the same function as the control panel on the mobile workstation.
The following functions can also be controlled:

- Brakes for all directions of movement
- Vertical movement
- Emergency STOP

The motorization package includes an additional control module which is attached to the remote control unit and provides functionalities to operate the motorized orbital and angular movement.

The clear display of the angular and orbital angles- on the control panel simplifies positioning.
The additional control module includes position storage keys for storage and retrieval of 2 orbital and angular positions with corresponding collimator values.

The position memory provides an additional key on the touch control panel which enables the orbital and /angular position to be stored and retrieved easily. The collimator value associated with the selected positions is also stored. The clear display of the angular and orbital angles with orientation arrows on the control panel allows the stored value to be retrieved easily.

With approx.16 million display colors and anti-glare coating for displaying live and reference images. Large horizontal and vertical viewing angles of 170° each. Screen size 19"/48 cm, image display with 1280x1024 pixels. Typical/Maximum brightness 4001600 typ. cdlm2.

Description

C-arm functions that previously could only be controlled from within the non-sterile area, are now accessible from within In fhe sterile area via fhe remote control unit.

This includes all functions of the touch control panel plus:

- Brakes for all directions of movement

- Control of vertical movement

  Emergency STOP

The remote control unit enclosed in sterile packaging is attached directly to the railing of the OR table by means of a special holder. The robust cable connection of the system ensures an ever reliable control. _

Image acquisitiorrincludIrrg subtraction angiography (SUB) and roadmap (ROAD).

Acquisition rates of 0.5 to 30 f/s, storage rate can be configured.

Automatic request for contrast medium injection following the acquisition of the mask image. Display of dynamic changes during the contrast medium flow.

Adding of the anatomical background (landmark) from 0% to 100%. Simultaneous display of the corresponding pre-contrast images on the right-side monitor. Peak opacification for iodine contrast (MaxOpac) and CO2 contrast (MinOpac).

Further processing functions:

- Pixelshift

- Remask

Roadmap technique for easy catheter guidance, dilatation, and stent implantation

- Image acquisition and subtraction angiography (SUB) and roadmap (ROAD).

- Acquisition rates of 0.5 to 30 f/s, storage frequency is configurable.

- Automatic request for contrast medium injection following acquisition of the mask image. Display of dynamic changes during the contrast medium flow.

- Adding of the anatomical background (landmark) from 0% to 100%. Simultaneous display of the corresponding precontrast images on the right monitor. Peak opacification for iodine contrast (MaxOpac) and CO2 contrast (MinOpac).

- Recalculation of contrast-medium-filled image through manual adjustment of the corresponding subtraction series.

- Ability to reuse one of the contrast-filled images generated in a study for madmapping.

Compared to the regular vessel visualization software, the premium package offers additional functions to improve

Description

the quality of contrast-filled images and to reduce the amount of contrast medium administered.

Additional processing functions:

- Pixel shift

- Remask

- Live graphic overlay

- Reuse of contrast-filled image

- Roadmap technique for easy catheter guidance, dilatation, and stent implantation

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With regard to expenses for interface configurations that might be required, the agreements on maintenance/service of the product apply

WLAN Client module with Ethernet connection for wireless transmission of DICOM image data, e.g. to a PACS (Picture Archiving and Communication System).

- Supported WLAN standards: 802.11 alb/e/g/hII/n
- Supported Frequency bands: 2.4 / 5 GHz
- Security / Authentication: 802.11 i, 802.1x, WPA/WPA2. WPA2 Enterprise supplicants EAP-TLS, EAP-TTLS (MSCHAPv2), EAP-PEAP (MSCHAPv2). Supports certificates and private key upload / storage (multiple)
- Data encryption: MP, AES
- Supports DHCP-client

This module follows United States/Canada regulations regarding available frequencies.